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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,710	12/04/2003	Yoshie Iwakura	60419 (48882)	9935
21874	7590	02/16/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			CRENSHAW, MARVIN P	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 02/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,710

Applicant(s)

IWAKURA ET AL.

Examiner

Marvin P. Crenshaw

Art Unit

2854

fm

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 18 - 23 is/are rejected.
- 7) ☒ Claim(s) 2 - 17, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/04/2033 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

Claims 2 – 17, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

With respect to claim 2, the prior art does not teach or render obvious the total combination as claimed including a paper transport apparatus wherein at least one of the pressure roller pair or pairs comprises one or more drive rollers and one or more idler rollers at least one of the drive roller or rollers comprises at least one metal roller and at least one of the idler roller or rollers comprises at least one electrically conductive elastic roller.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (JP08185063) in view of Komuro (JP06112853).

With respect to claim 1, Kobayashi teaches a paper transport apparatus and method (Fig. 2) comprising one or more image carriers carrying toner (1) one or more transfer means (2), rotating and coming in contact with at least one of the image carrier or carriers, for causing one or more toner images formed on at least one of the image carrier or carriers to be electrostatically relocated onto one or more sheets of paper and one or more paper transport means disposed upstream in one or more transport directions relative to at least one of the transfer means and comprising one or more pairs of pressure rollers (See Fig. 2, 4 and 5) holding one or more lead edge portion or portions of at least one of the sheet or sheets of paper in one or more nips formed there between and rotating so as to cause transport of same, at least one of the paper transport means (Fig. 2) being disposed to the side, on which at least one of the image carrier or carriers is present of a plane more or less tangent (Fig. 2) to at least one nip formed between at least one of the image carrier or carriers and the one or more lead edge portions of the at least one of the transfer means.

However, Kobayashi does not teach at least one of the sheet or sheets of paper being transported from at least one of the paper transport means along a trajectory toward at least one of the transfer means on the opposite side of said plane therefrom.

Komuro teaches at least one of the sheet or sheets of paper being transported from at least one of the paper transport means along a trajectory (Fig. 1) toward at least one of the transfer means on the opposite side of said plane therefrom.

It would have been obvious to modify Kobayashi to have at least one of the sheet or sheets of paper being transported from at least one of the paper transport means along a trajectory toward at least one of the transfer means on the opposite side of said plane therefrom as taught by Komuro to provide an efficient means for aligning the sheet when it contacts the roller.

With respect to claim 18, Kobayashi teaches a paper transport method for transporting one or more sheets of paper relative to one or more image forming means (Fig. 2) comprising one or more image carriers (1) carrying toner and one or more transfer rollers (2), rotating and coming in contact with at least one of the image carrier or carriers for causing one or more toner images formed on at least one of the image carrier or carriers to be electrostatically relocated onto one or more sheets of paper, said paper transport method (Fig. 2) including the steps of providing one or more paper transport means (See Fig. 2, 4 and 5) disposed upstream in one or more transport directions from at least one of the transfer means and to the side on which at least one of the image carriers is present of a plane more or less tangent (Fig. 2) to at least one first nip formed between at least one of said image carrier or carriers and at least one of said transfer roller or rollers (See Fig. 2), said one or more paper transport means comprising one or more pairs of oppositely rotating pressure rollers (4,5) holding one or

more leading edge portion or portions of at least one of said sheet or sheets of paper in one or more second nips formed there between.

However, Kobayashi does not teach at least one of the sheet or sheets of paper being transported from at least one of the paper transport means along a trajectory toward at least one of the transfer means on the opposite side of said plane therefrom.

Komuro teaches transporting said leading edge portion or portions of said at least one of the sheet or sheets of paper from said at least one second nip of the paper transport means along a trajectory toward at least one of said transfer roll or rollers on the opposite side of said plane therefrom.

It would have been obvious to modify Kobayashi to have transporting said leading edge portion or portions of said at least one of the sheet or sheets of paper from said at least one second nip of the paper transport means along a trajectory toward at least one of said transfer roll or rollers on the opposite side of said plane therefrom as taught by Komuro to provide an efficient means for aligning the sheet when it contacts the roller.

Claims 19 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Komuro and further in view of Toyama et al.

Kobayashi as modified by Komuro teaches all that is claimed, as discussed in the above rejection of claims 1 and 18, except a paper transport method wherein one or more voltages is applied to the image carrier or carriers and the one or more pressure rollers.

Toyama et al. teaches a paper transport method (Fig. 1) wherein one or more voltages (See col. 11, lines 20 - 41), that is or are times in prescribed fashion and opposite in polarity to at least one electrostatic potential applied to at least one of the image carrier or carriers, is or are applied to one or more of said pressure rollers (See col. 11, lines 20 - 41), of said one or more paper transport means such that said one or more voltages (See col. 26, lines 4 - 15) is or are applied to only lead edge portion or portions of at least one of said sheet or sheets of paper transported to at least one of said image forming means, at least one length of at least one of the paper lead edge portion or portions at which voltage is applied is not so long as to substantially affect information contained in at least one image formed on at least one of the image carrier or carriers (See col. 11, 43 - 54), wherein at least one of the applied voltage or voltages is varied in accordance with difference in thickness attributable to type of transported paper, being increased with increasing thickness of the paper (See col. 11, lines 20 - 30), wherein at least one absolute value of at least one maximum applied voltage is less than at least one absolute value of at least one surface potential to which at least one of the image carrier or carriers is charged (See col. 29, lines 1 - 16) and at least one absolute value of at least one maximum applied voltage is approximately equal to at least one absolute value of at least one development bias voltage which when applied to at least one of the transfer means would cause at least one latent electrostatic image on at least one of the image carrier or carriers to become manifest (See col. 25, lines 11 - 30).

It would have been obvious to one of ordinary skill in the art to further modify Kobayashi to have a paper transport method wherein one or more voltages is applied to the image carrier or carriers and the one or more pressure rollers as taught by Toyama et al. so as to provide an efficient means for applying a charge to the paper while it is being transported through the printer so the toner particles will adhere to the paper and the image will not be distorted.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 – 25 have been considered but are moot in view of the new ground(s) of rejection. Specifically, Kobayashi teaches a paper transport apparatus. Also, Komuro has been added to teach the sheet being transported at a trajectory towards on of the transfer rolls.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marvin P. Crenshaw whose telephone number is (571) 272-2158. The examiner can normally be reached on Monday - Thursday 7:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



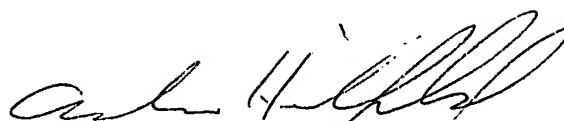
Art Unit: 2854

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MPC

February 9, 2006



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